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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,397	10/31/2003	Jason R. Brindel	9314-41	3313
54414	7590	07/05/2006	EXAMINER	
MYERS BIGEL SIBLEY & SAJOVEC, P.A.			VU, PHU	
P.O. BOX 37428			ART UNIT	
RALEIGH, NC 27627			PAPER NUMBER	
			2871	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/699,397

Applicant(s)

BRINDEL, JASON R.

Examiner

Phu Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-25 is/are allowed.
- 6) ☒ Claim(s) 1 and 26 is/are rejected.
- 7) ☐ Claim(s) 2-14 and 27-34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Response to Arguments*

The indicated allowability of claims 1 and 26 are withdrawn in view of the newly discovered reference(s) to Minoura. Rejections based on the newly cited reference(s) follow.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1 are rejected under 35 U.S.C. 102(b) as being anticipated by Minoura 6433847.**

**Regarding claims 1,** Minoura teaches a liquid crystal comprising a micro-electromechanical reflective array and a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between first and second positions and being configured to operate in a first mode of operation when the plurality of plates are in the first position and a second mode of operation when the plates are in a the second position (see column 14 lines 59-65 and see abstract). Minoura teaches a liquid crystal display with a micro-

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electromechanical reflective array (see column 14 lines 59-65) that uses the mirrors to adjust the reflection plane of a reflective display thereby improving the viewing angle. Therefore, first position can be considered arbitrary viewing angle X degrees and second position to be X + Y degrees where X and Y are both nonzero degree angles as viewing angle is considered one mode of operation and viewing angle X+Y is considered another mode of operation.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Minoura in view of Spear 6310767.**

**Regarding claim 26,** Minoura teaches all the limitations of claim 26, except a housing with the LCD being integral with the housing. Spear teaches a housing wherein the LCD is integral with the housing that also acts as an electromagnetic shield (see abstract) as well as provide support. Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to apply a housing to support the LCD and also provide shielding against adverse effects from other electronic components.

***Allowable Subject Matter***

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Claims 2-25 and 27-34 are allowed.

following is a statement of reasons for the indication of allowable subject matter:

**Regarding claims 2-12, 14-25 and 27-34**, there is no prior art of record that teaches a liquid crystal display comprising: Minoura teaches the all the limitations of claims 2, 15, 25 and 27 and 34 (all other claims dependent) except the first position corresponding to a substantially parallel to the LC layer and second position substantially perpendicular to the LC layer.

Minoura teaches a liquid crystal comprising a micro-electromechanical reflective array and a plurality of plates associated with the micro-electromechanical reflective array, the plates being movable between first and second positions and being configured to operate in a first mode of operation when the plurality of plates are in the first position and a second mode of operation when the plates are in a the second position (see claim 1 rejection). Minoura teaches the plates movable between first and second positions however fails to disclose any exact or relative positions that would indicate being parallel or perpendicular to the LC layer.

**Regarding claim 13**, the prior art fails to teach a rear polarizer and a front polarizer overlying the second transparent layer.

The addition of polarizers in these respective positions would be obvious in most circumstances however, since Minoura explicitly discloses that the display is meant to work without polarizers which reduce light utilization than any

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combination of a polarizer with Minoura would be a teaching away with respect to Minoura.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562. The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu  
Examiner  
AU 2871

  
ANDREW SCHECHTER  
PRIMARY EXAMINER